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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,319	05/10/2007	Kevin John Adams	WATE-0014	1925
23377	7590	07/19/2011	EXAMINER	
WOODCOCK WASHBURN LLP			JACOBSON, MICHELE LYNN	
CIRA CENTRE, 12TH FLOOR			ART UNIT	PAPER NUMBER
2929 ARCH STREET			1782	
PHILADELPHIA, PA 19104-2891				
NOTIFICATION DATE		DELIVERY MODE		
07/19/2011		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/566,319	<b>Applicant(s)</b> ADAMS ET AL.
	<b>Examiner</b> MICHELE JACOBSON	<b>Art Unit</b> 1782

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 07 June 2011.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-3,6,8-10,12,14,16-18 and 20-29 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-3,6,8-10,12,14,16-18 and 20-29 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a) All    b) Some \* c) None of:
      1. Certified copies of the priority documents have been received.
      2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
      3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-3, 6, 8-10, 12, 14, 16-18 and 20-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weekers U.S. Patent No. 5,328,142 (hereafter referred to as Weekers) and Fyfe U.S. Patent No. 6,295,782 (hereafter referred to as Fyfe).

3. Weekers teaches a spirally wound kraft paper tube for use in concrete column forming comprising at least one wound layer of water impermeable plastic film intermediate the paper layers. (Col. 1, lines 36-45) The polyethylene plastic layer renders the wall of the tube substantially impervious to the passage of water. (Col. 2, line 67-Col. 3, line 3)

4. Each of the paper layers has a thickness preferably less than 0.5 mm. (Col. 2, lines 56-57) The plastic layer may be a polyethylene film not greater than 0.3 mm thick with the overall thickness of the tube wall preferably between 0.5 and 3 mm. (Col. 2, lines 57-66)

5. Weekers acknowledges that in view of the thin, flexible nature of the walls of the tube, it may not have sufficient integrity to be self-supporting in the case of relatively long tubes. Specifically, long tubes may tend to bulge, particularly at the bottom of the tube, from the weight of the concrete. To alleviate this problem, Weekers suggests using an additional split support tube held together with wires or bands which closely surround and support the forming tube. (Col. 3, line 61-Col. 4, line 9)

6. Weekers is silent regarding disposing a polymer mesh in between the paper and polyethylene layers.

7. Fyfe teaches a concrete forming tube comprising a composite shell made by spirally winding resin impregnated fabric layers around a liner. (Col. 2, lines 1-5) The fabric may comprise fibers such as polymeric materials like polyaramid, Kevlar, polyethylene and aramid. (Col. 4, lines 1-2)

8. The number of warp yarns per inch is preferably between about 5 and 20 and the number of fill yarns per inch is preferably between about 0.5 and 5. (Col. 4, lines 27-30) The fabric layers are recited to be impregnated with resin in order to function properly. The resin matrix selected must be tough and waterproof. (Col. 5, lines 25-34)

9. The liner material utilized is formed of water-resistant and impermeable material to protect the concrete core from moisture and corrosive materials as well as to protect the composite shell from the alkalinity in the concrete core. (Col. 6, lines 1-4)

Polyethylene is recited as a suitable liner material. (Col. 6, lines 5-6)

10. Both Weekers and Fyfe are directed towards concrete forming tubes comprising waterproof polyethylene layers that provide a means for supporting the concrete forming

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tube. Fyfe solves the problem of bulging of the concrete forming tube disclosed by Weekers by providing a resin impregnated wrapped textile reinforcement layer.

11. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have employed a resin impregnated textile reinforcement layer such as that disclosed by Fyfe in the invention of Weekers in order to provide structural reinforcement to the tube disclosed by Weekers and to solve the problem of the concrete forming tube bulging at the bottom. One of ordinary skill would have disposed the textile layer between the polyethylene and paper layers recited by Weekers since the polyethylene layer must necessarily be disposed on the interior of the tube to provide the function of protecting the concrete from water and protecting the forming tube from alkalinity as disclosed by Weekers and Fyfe respectively.

12. Regarding claims 1, 14, 16, 17, 21, 22, 24, 25 and 26: Fyfe discloses that the resin for the fabric layer must be tough and waterproof and both Weekers and Fyfe employ polyethylene as a waterproof material that must be tough to be in contact with the concrete used in the forms. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized polyethylene or HDPE as the resin for impregnating the fabric layer since polyethylene is both tough and waterproof. Such a multilayer laminate would comprise a sub-layer comprising a paper layer, a fabric layer impregnated with polyethylene which provides bonding to the paper layer and an additional a polyethylene layer. A spirally wound tube including such a laminate formed by bonding the sublayers together in the conventional manner of

forming butt joints would have been the same invention as claimed in claims 1, 14, 16, 17, 22, 24, 25 and 26.

13. Regarding claims 2 and 18: Regarding the thread density claimed, in the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990)

14. Regarding claims 3, 6 and 20: It would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected grammage weights and tensile strength of the materials used that would be appropriate for the concrete forming tube application. The obvious selection of materials of appropriate strength would have produced the same invention as claimed in claims 3, 6 and 20.

15. Regarding claims 8-10, 12 and 28: It would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the tube produced by the combination of Weekers and Fyfe whatever thickness was necessary for the application the tube was intended to be used for. The thickness of the tube is a result effective variable that controls the strength of the tube. The obvious optimization of the thickness of the tubing would have produced tubes with the same thicknesses claimed in claims 8-10, 12 and 28 for use as concrete column forms. It is noted by the examiner that the limitations of "rigid" and "flexible" in claims 8 and 10 are of little patentable weight and are interpreted to be met by the obvious optimization of the thickness of the tube depending on the amount of strength required.

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16. Although Weekers and Fyfe do not recite the intended use limitation of a roll core, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Any tubular structure such as the tubes disclosed by Weekers and Fyfe could be used as a core to receive something rolled around it and therefore the structure produced by the combination of Weekers and Fyfe reads on the invention claimed in claim 12.

17. Regarding claims 23 and 27: The combination of the teachings of Weekers and Fyfe provides a spirally wound tube having a polyethylene layer.

18. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weekers U.S. Patent No. 5,328,142 (hereafter referred to as Weekers) and Fyfe U.S. Patent No. 6,295,782 (hereafter referred to as Fyfe) as applied to claims 1, 14 and 26 above in further view of Cordeiro, C. F. 2000. Vinyl Acetate Polymers. Kirk-Othmer Encyclopedia of Chemical Technology. Published Online: 4 DEC 2000 (hereafter referred to as Cordeiro).

19. Weekers teaches what has been recited above but is silent regarding the adhesive used to bond the spirally bound kraft paper layers comprising a polyvinyl acetate adhesive.

20. Cordeiro discloses that polyvinyl acetate polymers are found as components in adhesives in construction products. (pg. 1, 13)
21. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used a polyvinyl acetate adhesive for the adhesive between the kraft paper layers disclosed by Weekers since polyvinyl acetate was universally known to those of ordinary skill in the art to be useful as an adhesive in construction products as evidenced by Cordeiro. The selection of a known material based on its suitability for its intended use supports a *prima facie* obviousness determination. ("Reading a list and selecting a known compound to meet known requirements is no more ingenious than selecting the last piece to put in the last opening in a jig-saw puzzle." *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945) See also *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960) (selection of a known plastic to make a container of a type made of plastics prior to the invention was held to be obvious)) (MPEP 2144.07) The obvious modification of Weekers with Fyfe and Cordeiro would have produced the same invention as claimed in claim 29.

***Response to Arguments***

22. Applicant's arguments filed 6/7/11 have been fully considered but they are not persuasive.

23. Applicant asserts on page 7 of the remarks that the polyethylene layer claimed is distinct from the mesh impregnated with polyethylene disclosed by Fyfe. The examiner is not persuaded that the polyethylene disposed on top of the mesh does not constitute a layer of polyethylene. Although the polyethylene seeps through the mesh in the impregnated structure, there is still a layer of polyethylene material lying over the mesh.

24. Applicant asserts on page 7 that the resin of Fyfe "does not lie over or under, but rather within the fabric". The examiner is not persuaded by this characterization of Fyfe. The impregnated material of Fyfe necessarily lies over, under and within the fabric. The intermediate layer claimed by applicant is broadly reasonably interpreted to read on this structure. The claim limitations recited by applicant in claim 1 are not sufficient to exclude a layer impregnated with resin.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHELE JACOBSON whose telephone number is (571)272-8905. The examiner can normally be reached on Monday-Thursday 8:30 AM-6 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571)272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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